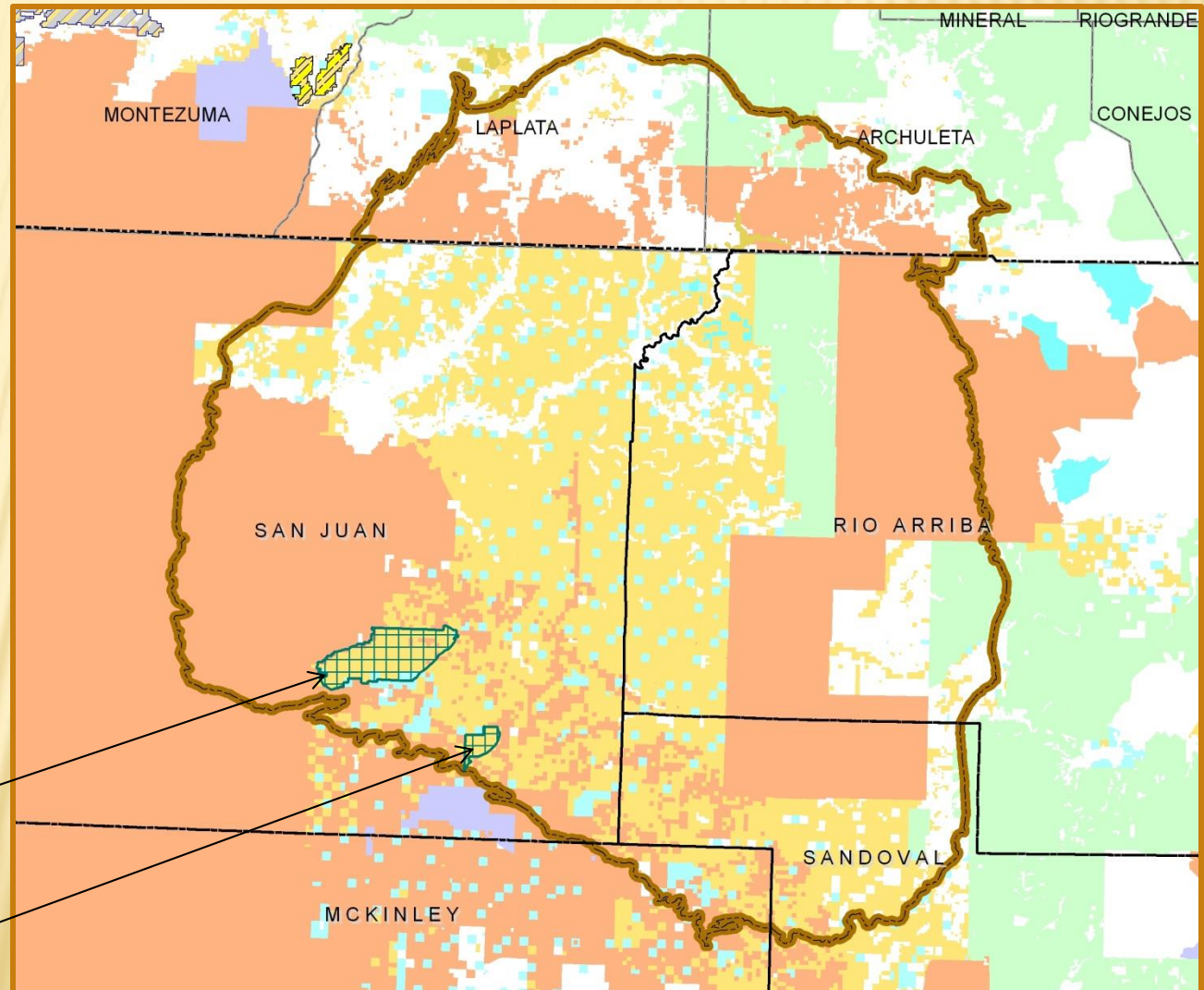
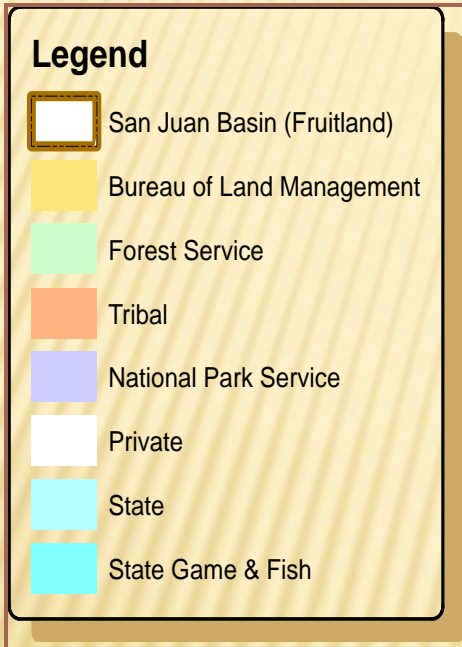


MANCOS SHALE

LAND OWNERSHIP



Wilderness

Wilderness Study
Area (WSA)

SJB: ACTIVE FEDERAL LEASES

Legend

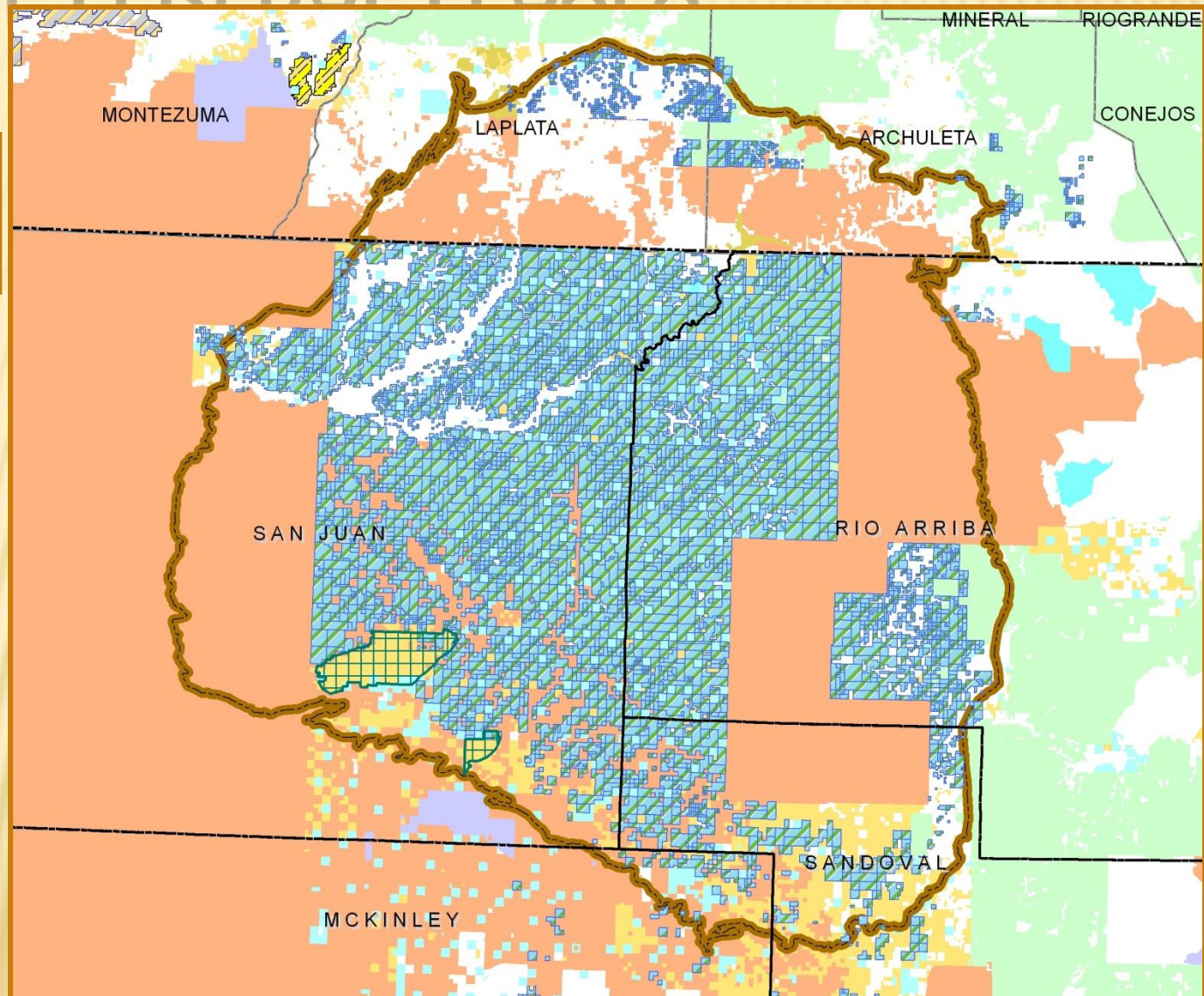
Active Leases, CO-NM

NM: 2,036,593 Acres
2,637 Leases

CO: 67,123 Acres
1,069 Leases

Total

2,103,616 Acres
3,706 Leases



LEASES HELD BY PRODUCTION (DEVELOPED)

Legend

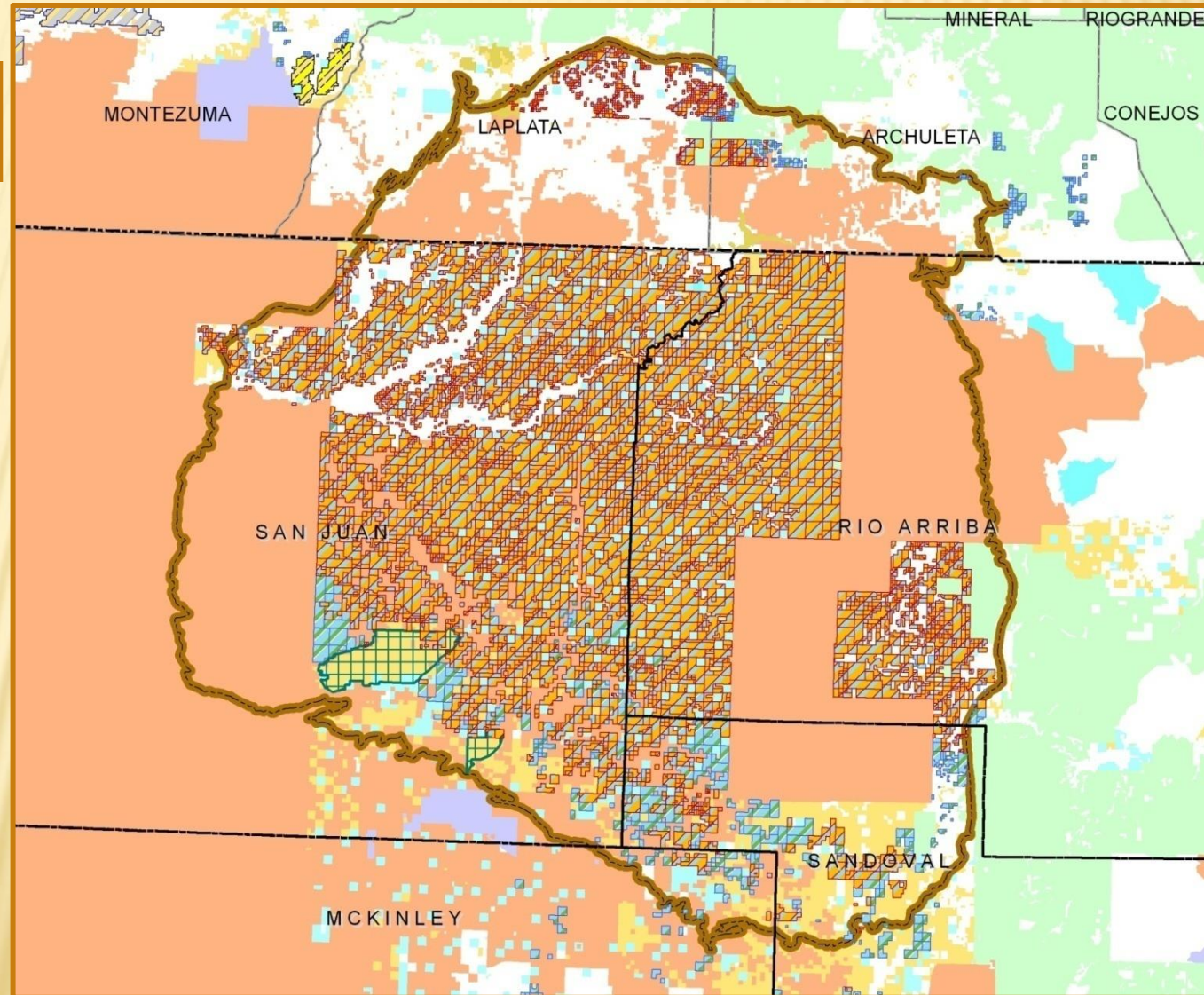
 Leases Held by Production

NM: 1,762,074 Acres
2,344 Leases

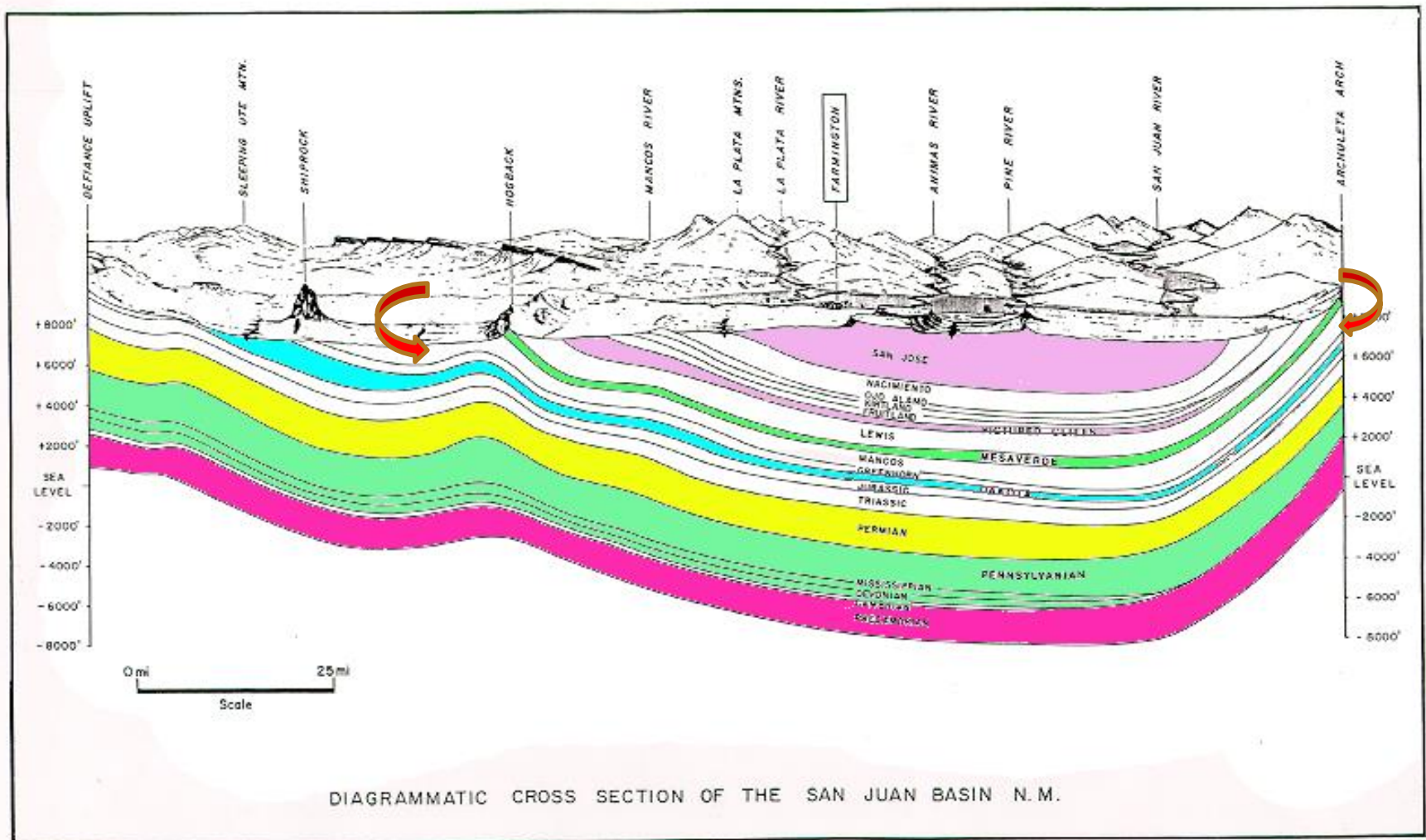
CO: 44,678 Acres
732 Leases

Total
1,806,752 Acres
3,076 Leases

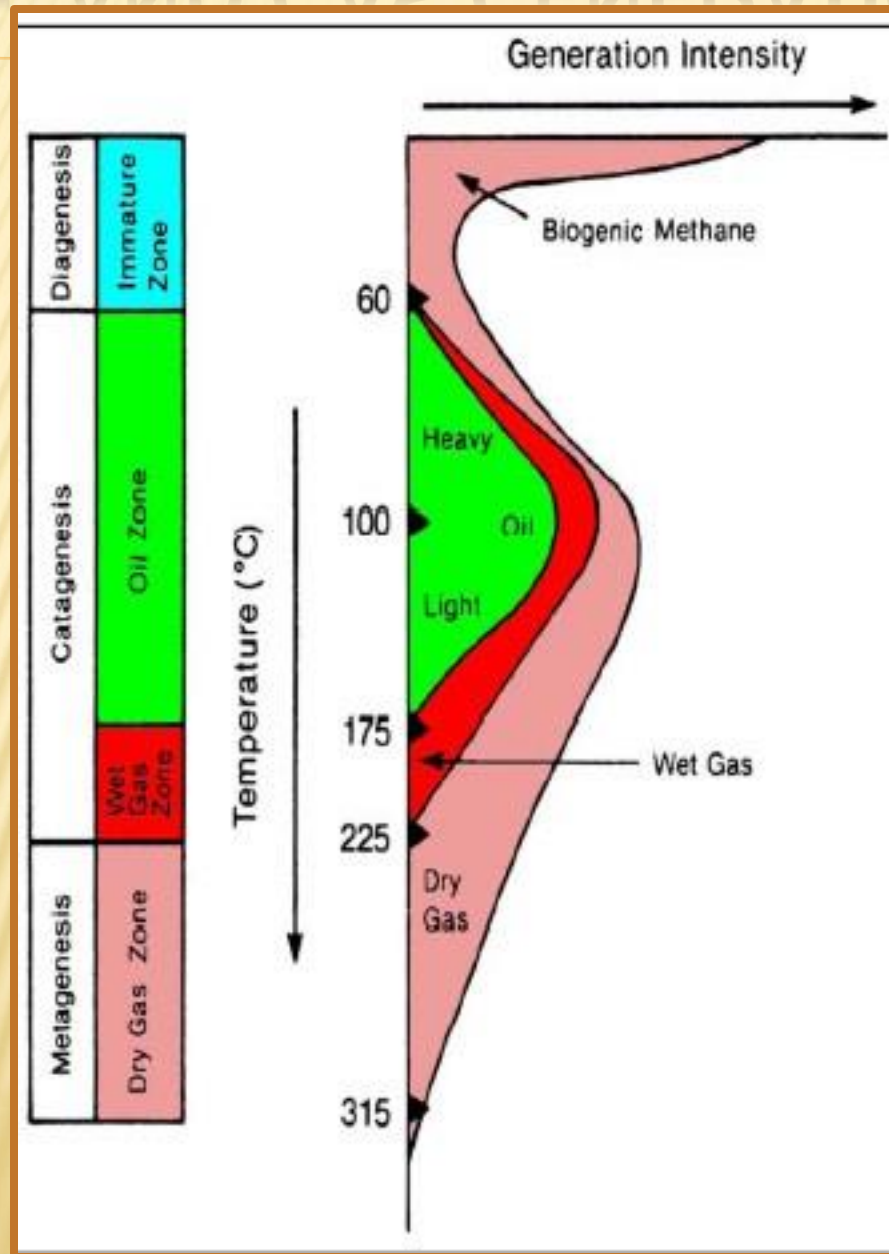
86% of all leased
acreage



DIAGRAMMATIC CROSS SECTION OF THE SAN JUAN BASIN



OIL AND GAS GENERATION

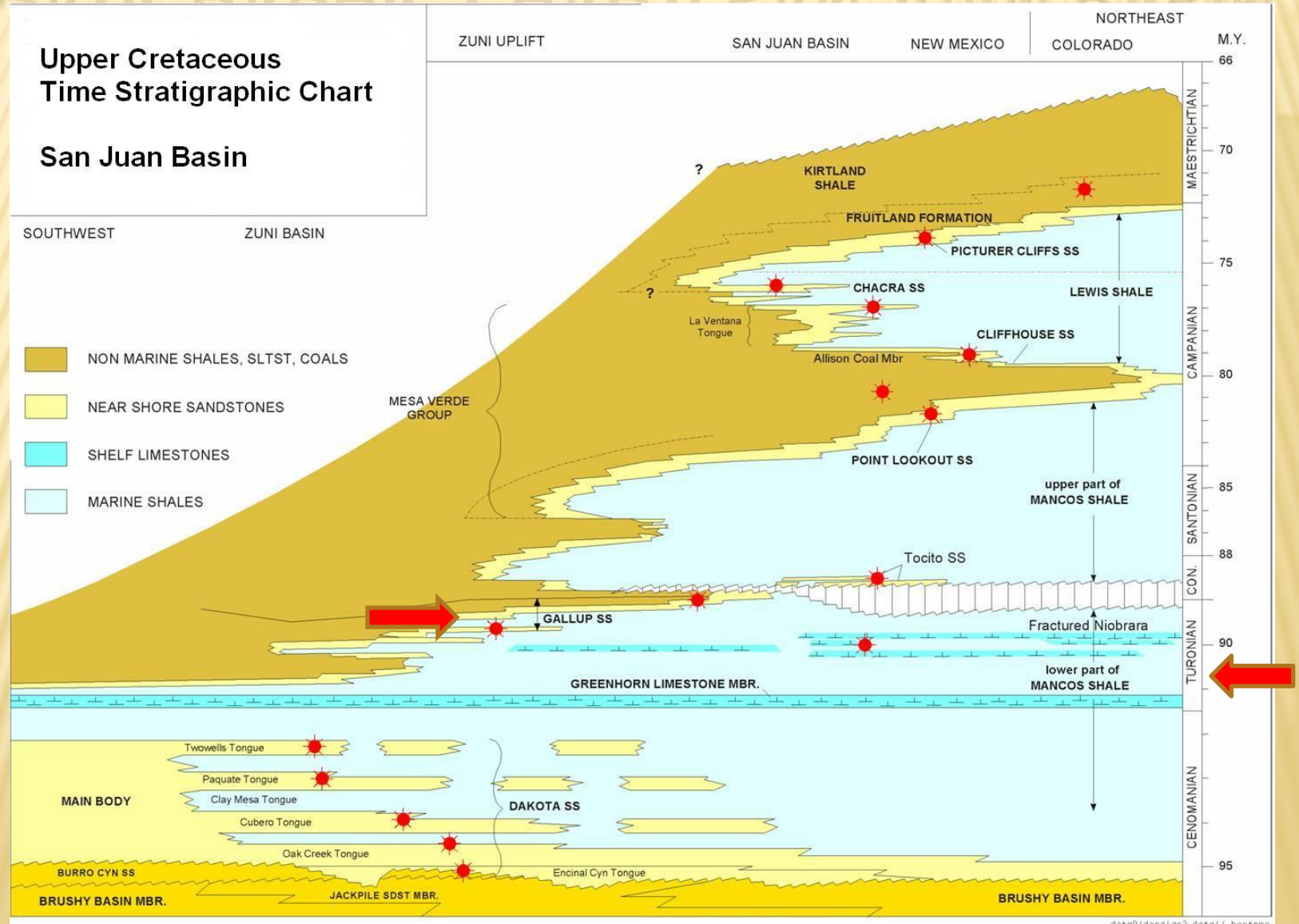


Biogenic Gas

Oil Window

Gas Window

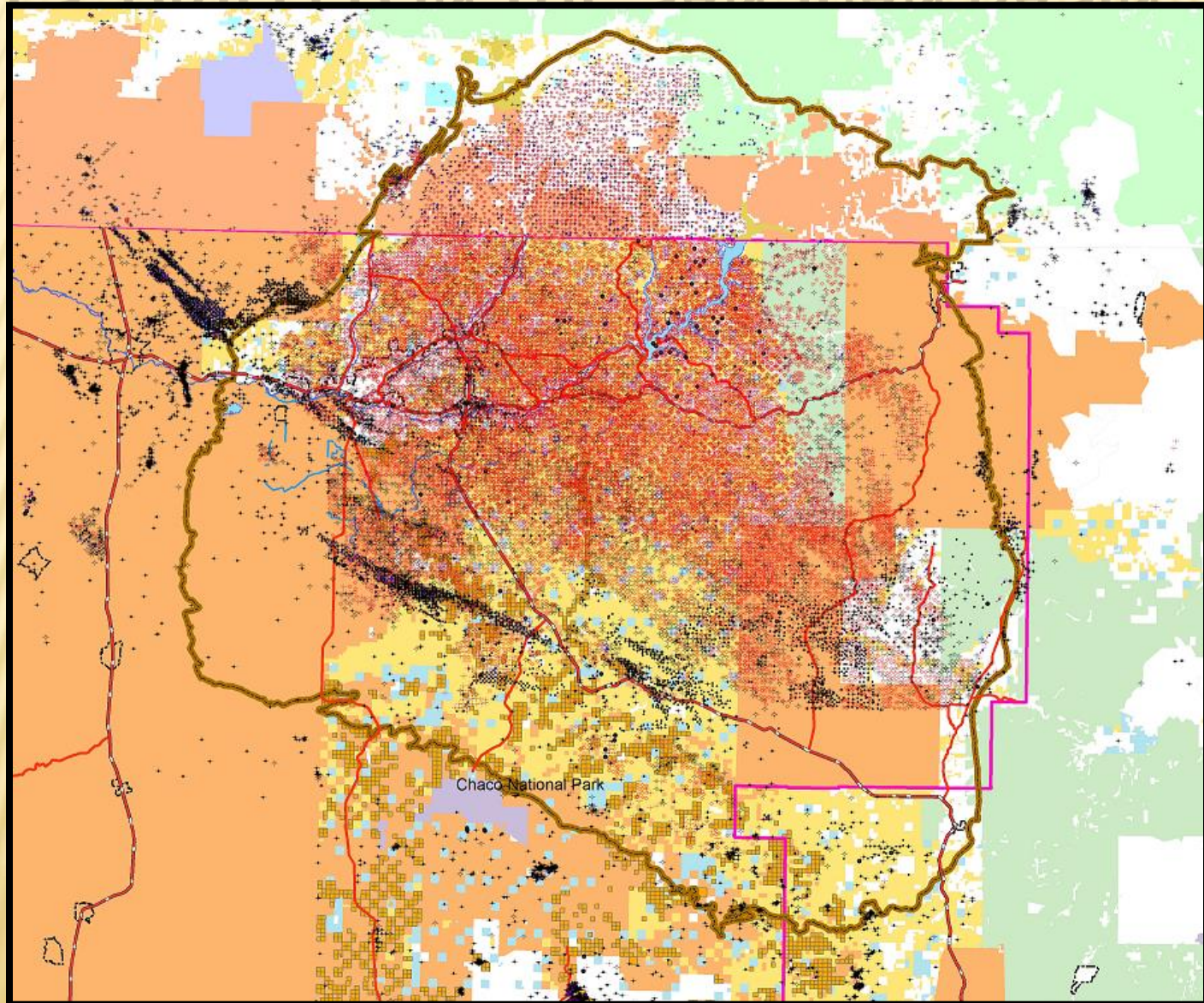
STRATIGRAPHIC CHART: SAN JUAN BASIN



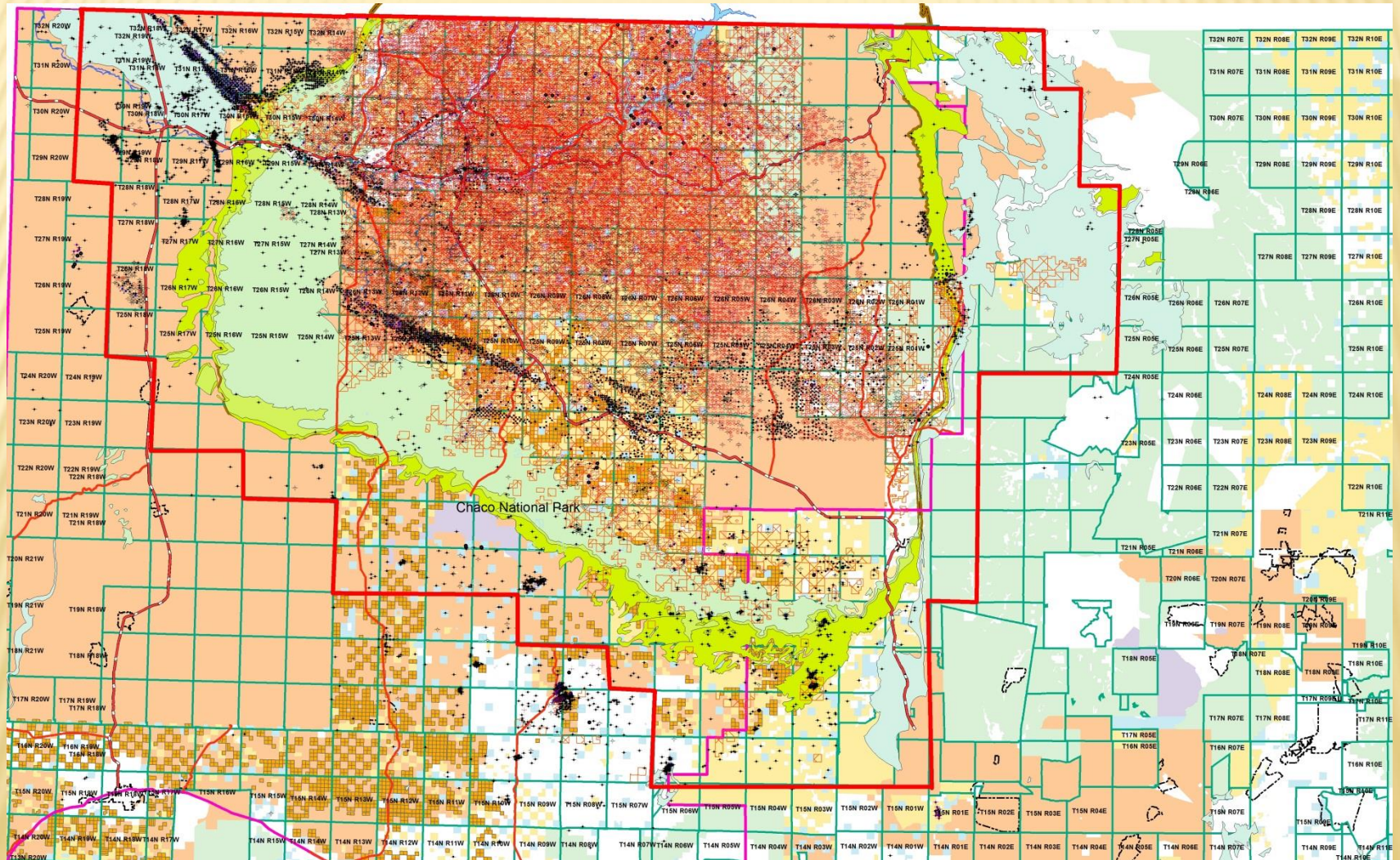
CUMULATIVE PRODUCTION BY GEOLOGIC HORIZON

Formation	Cum Gas (mcf)	Cum Oil (Bbls)	Cum Water (Bbls)		Well Count
Chacra	171,687,665	60,490	795,230		566
Dakota	6,904,170,759	69,068,317	114,602,952		7,780
Fruitland	16,687,743,952	344,790	842,380,287		8,543
Gallup	920,036,304	173,139,083	273,869,975		3,827
Hospah	33,603	17,832,296	380,467,839		245
Lewis/Mesaverde	167,916,024	391,136	523,944		317
Mancos	96,259,320	28,833,591	1,989,249		316
Mesaverde	11,736,498,030	45,142,064	31,431,788		6,880
Pictured Cliffs	4,080,968,420	973,615	22,073,342		5,926
TOTAL	40,765,314,077	335,785,382	1,668,134,606		34,400

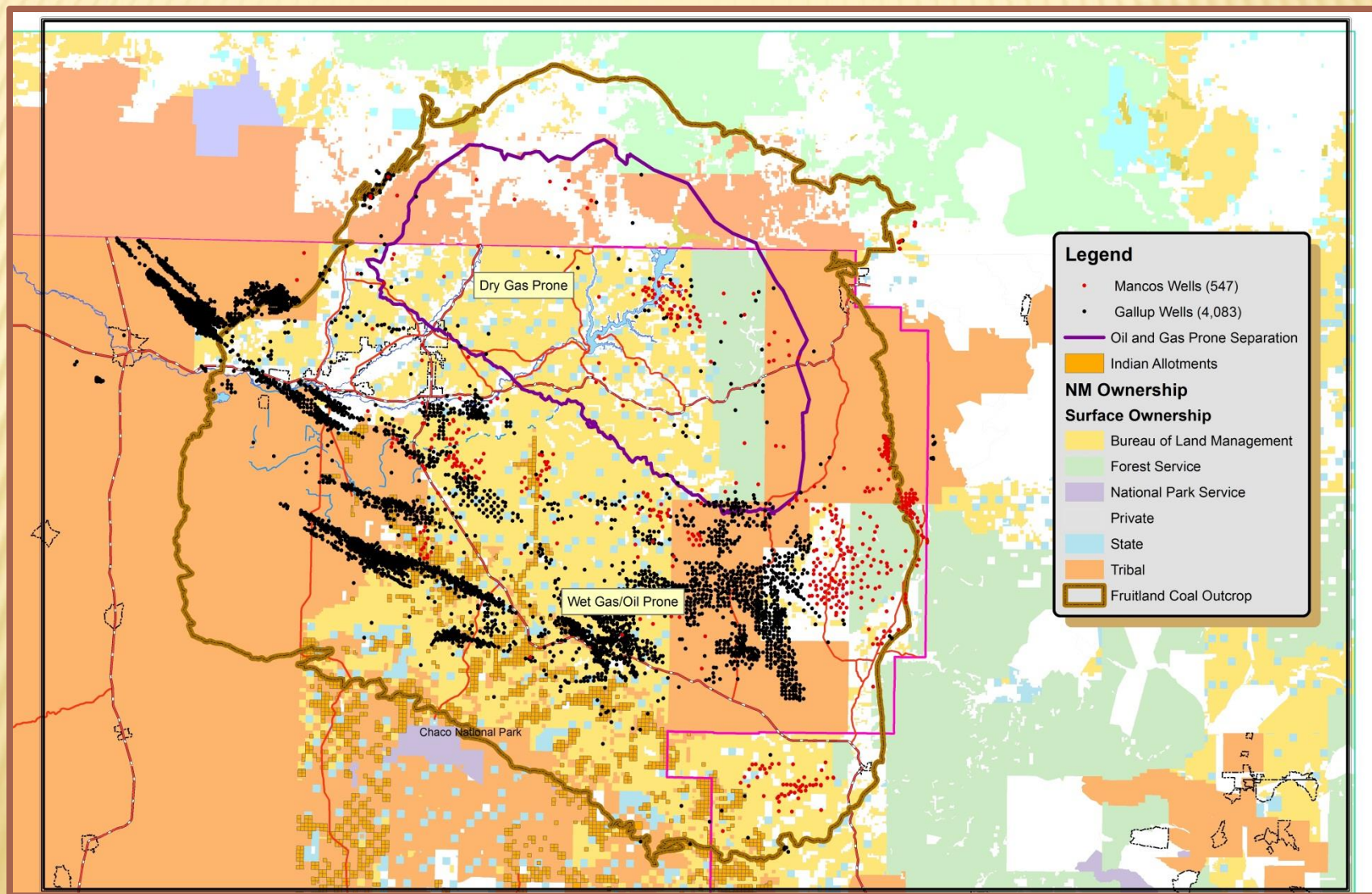
WELLS DRILLED IN THE SAN JUAN BASIN



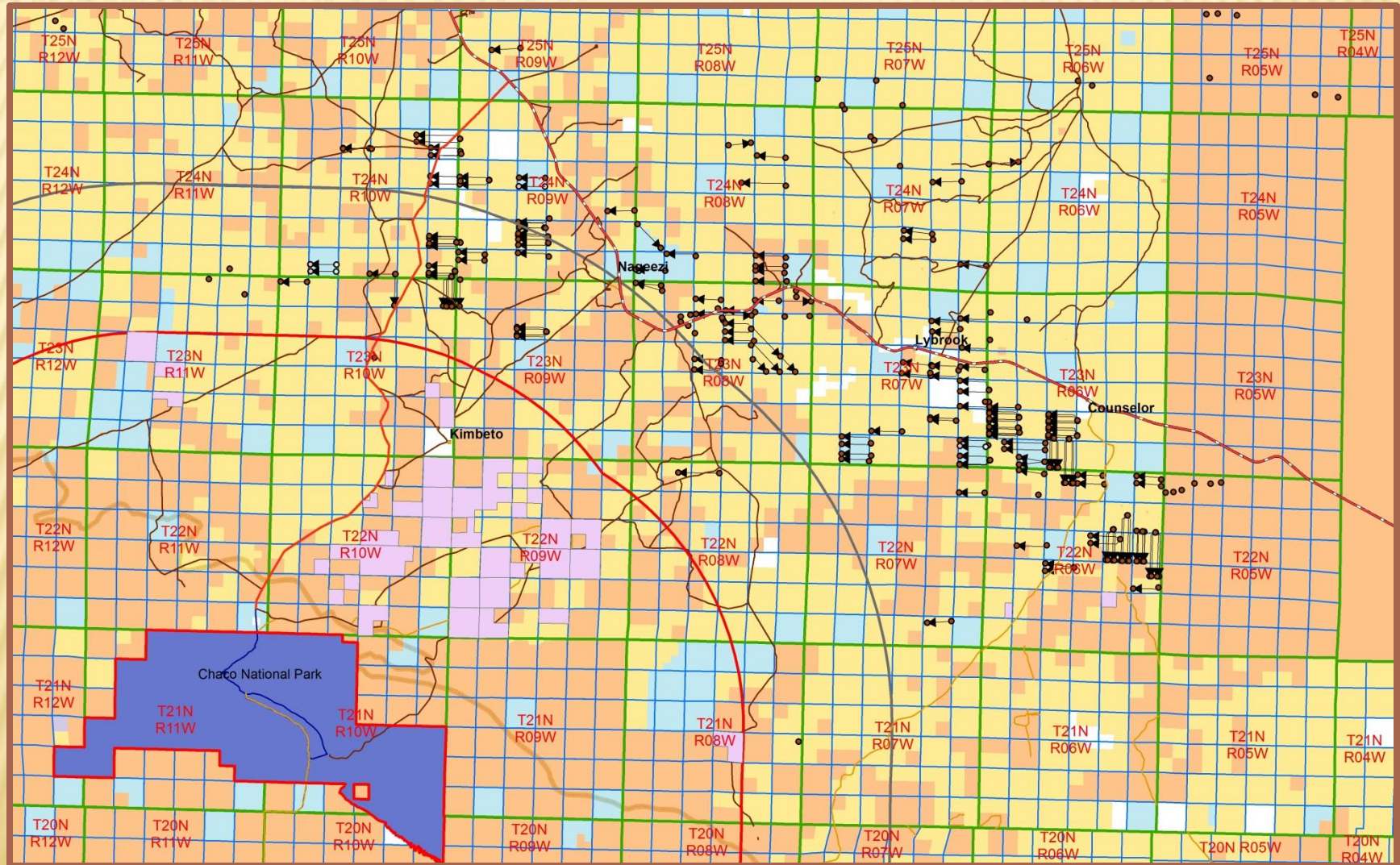
REVZUMVRIE FURFEZFEVRIE DFEFTUBIAFNI (REF) VREFV



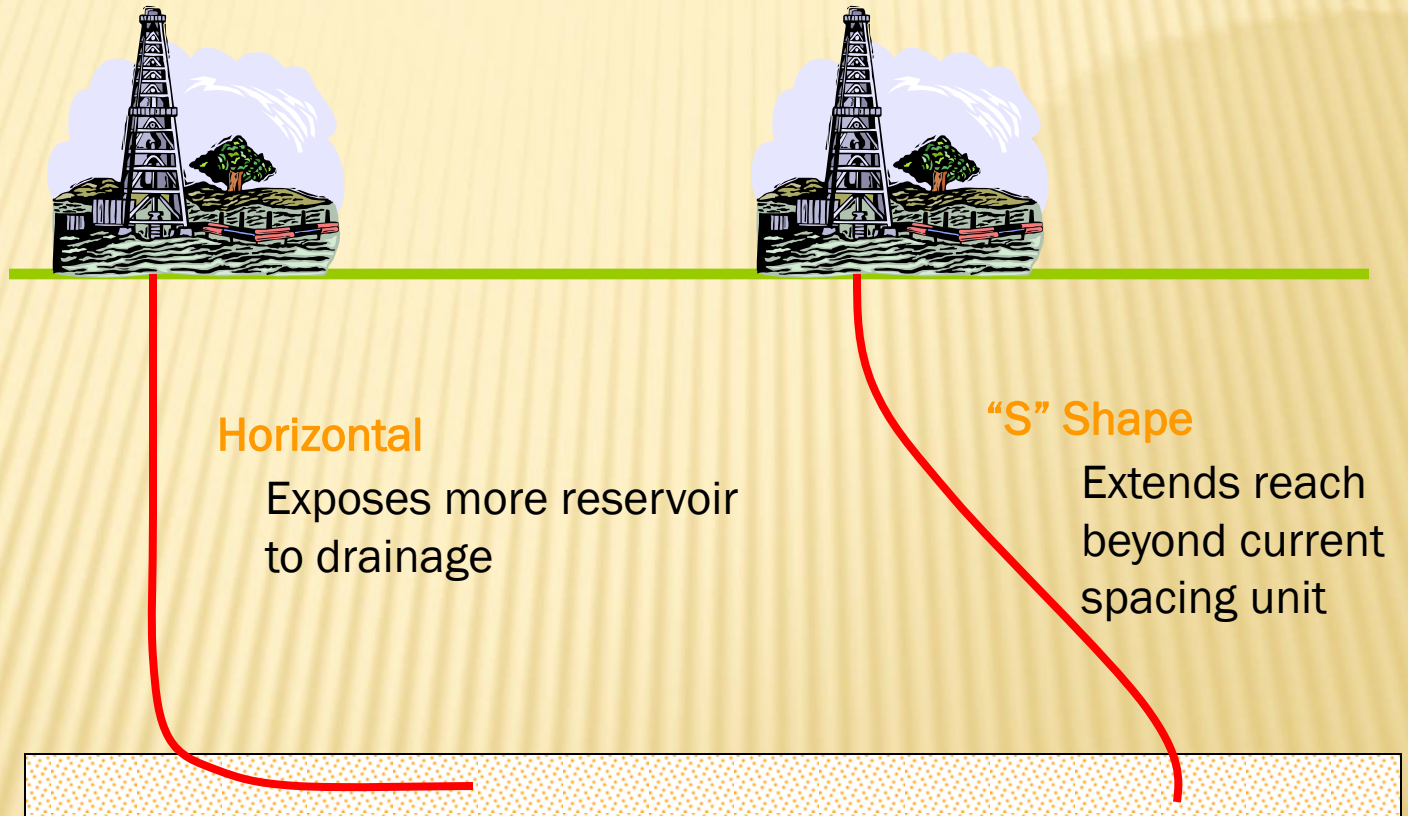
MANCOS/GALLUP DEVELOPMENT: SAN JUAN BASIN



MANCOS ACTIVITY

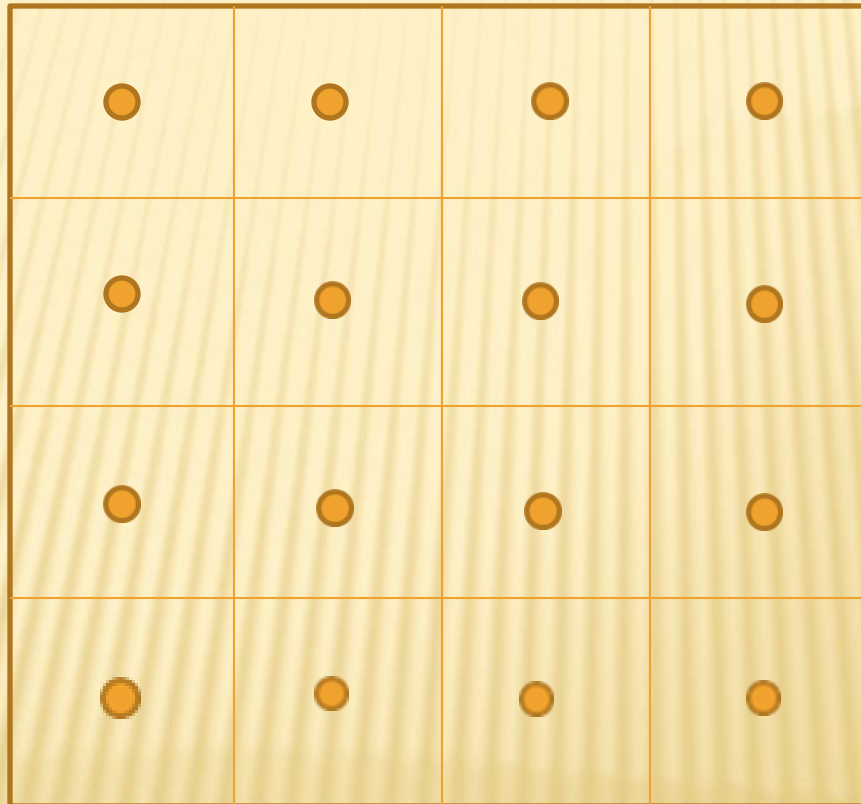


DIRECTIONAL WELL TYPES USED IN THE SAN JUAN BASIN



VERTICAL DRILLING: 40 ACRE SPACING

16 pads @ 2 ac. Ea.
32 acres disturbance

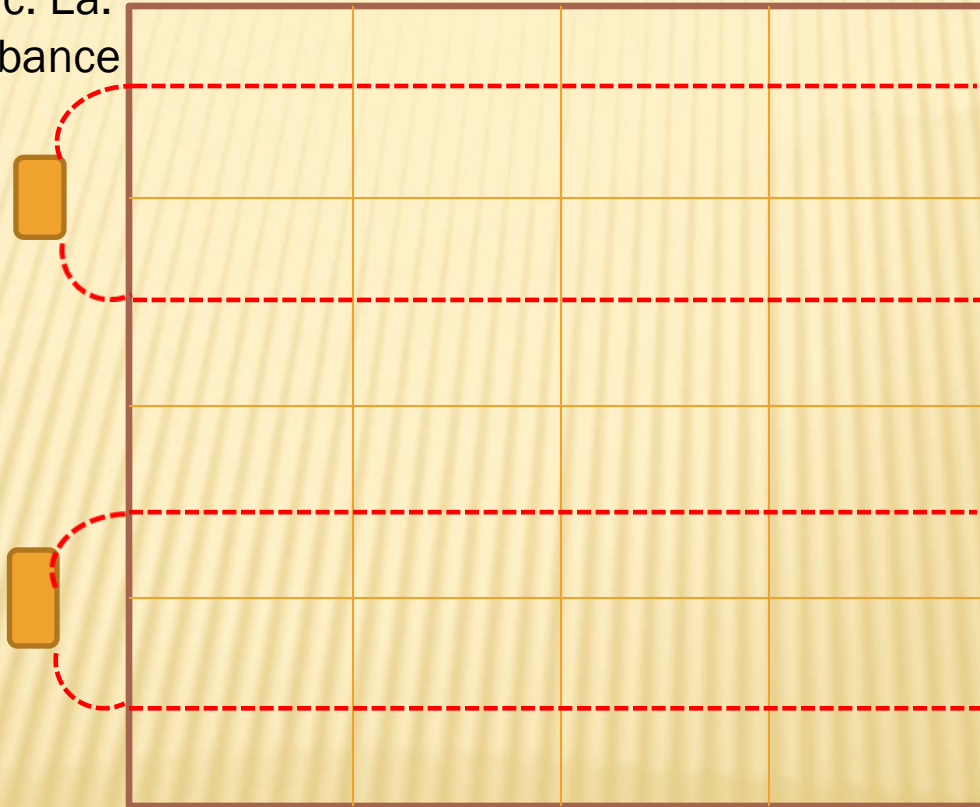


16 Wells
16 Pads

7 drilling days
Per well: 112 days

HORIZONTAL DRILLING: 40 ACRE SPACING

Two pads @ 6 ac. Ea.
12 acres disturbance



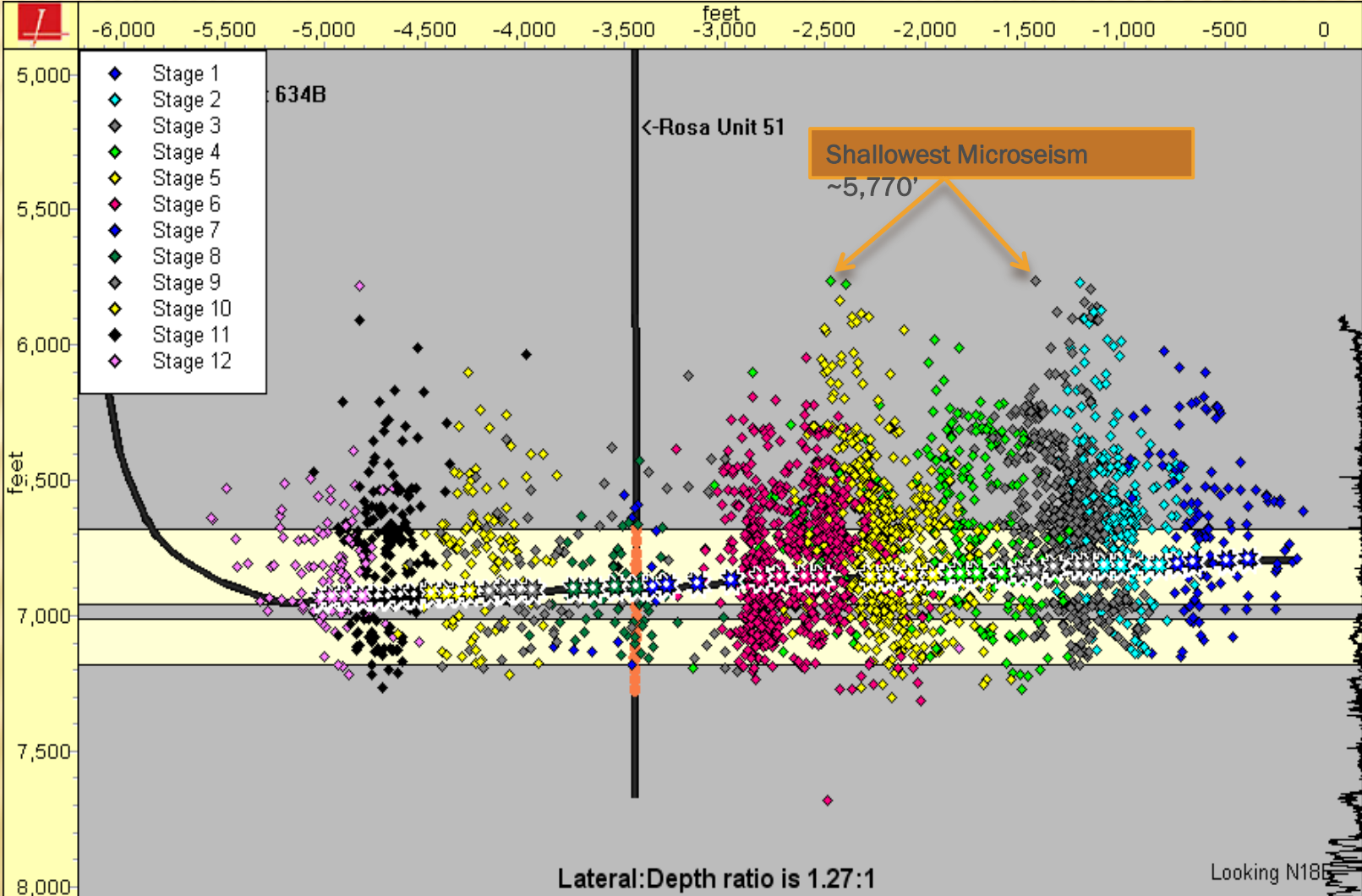
Four Wells
Two Pads

12 drilling days
Per well: 48 days

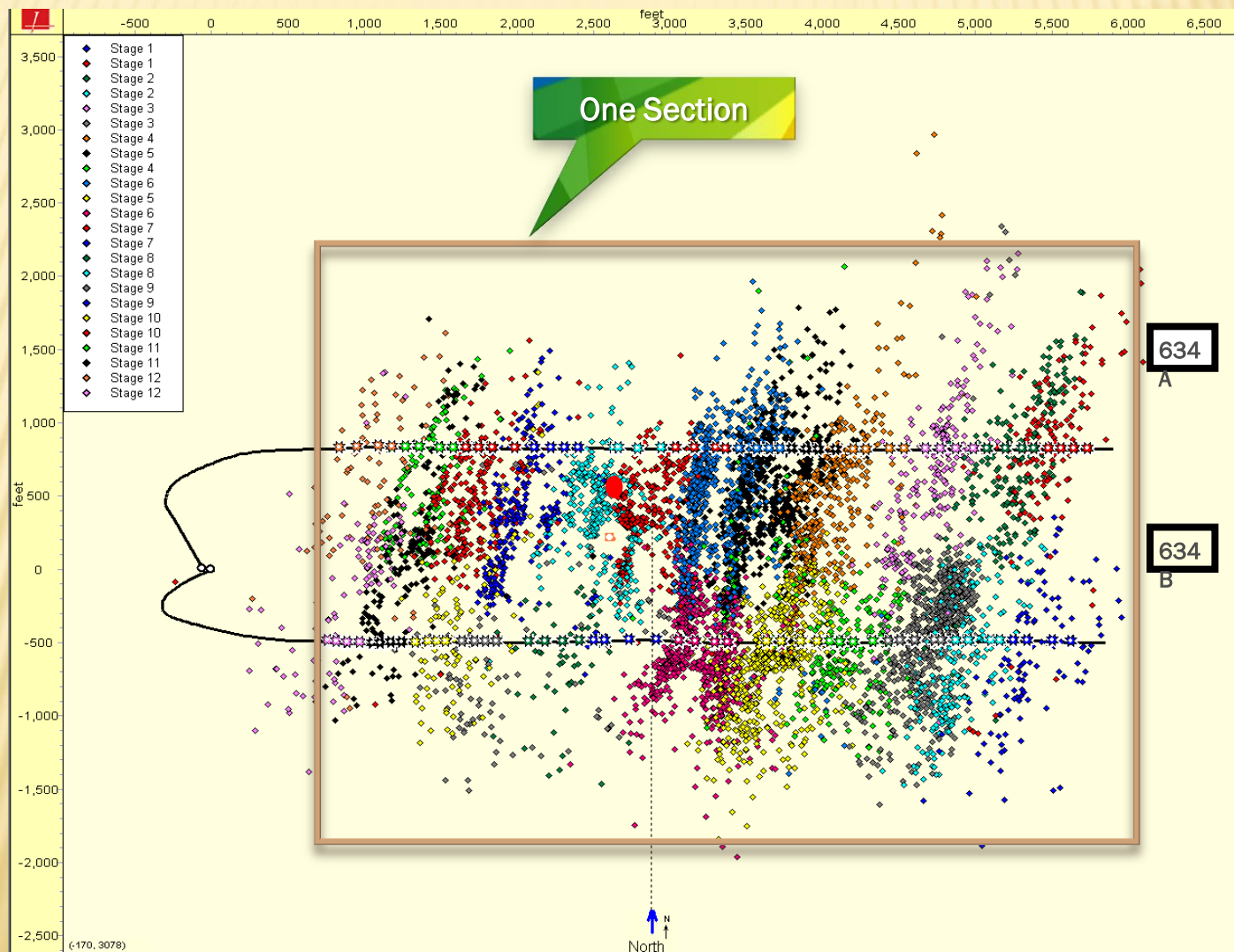
HYDRAULIC FRACTURING OF THE MANCOS/GALLUP



BOZV NMII P34B MICBO2FI2MIC VCI1A111



RU 634A&B: FRAC RESPONSE – MAP VIEW



MANCOS SHALE PLAY: SUMMARY

- ✖ Mancos Shale Play split between oil and gas
- ✖ Northern part of the SJB is gas prone while the southern part of the basin is oil prone
- ✖ Gas play is uneconomic at current gas prices
- ✖ Horizontal well development results in less emissions and surface disturbance than vertical wells with the same or higher resource recovered.